



National Aeronautics
and Space Administration

John F. Kennedy Space Center
Kennedy Space Center, Florida 32899

ENVIRONMENTAL NEWSLETTER

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Storage Tank Removal Project at Kennedy Space Center

Would you believe there are over 300 storage tanks at Kennedy Space Center (KSC)? Actually, there were over 300 storage tanks, but that number has been reduced substantially, and will continue to shrink. Since March 1995, the NASA has been implementing a project to properly close 49 unused and unneeded storage tanks at KSC and NASA owned property at Cape Canaveral Air Station. The proper closure of the storage tanks means that they are either removed or abandoned in place in accordance with all regulatory requirements. The \$1.06 million project is directed by NASA civil servants with the base operations contractor performing the work. Of the 49 storage tanks, 11 are aboveground and 38 are underground. The storage tanks vary in age from 5 to almost 40 years old and size from 500 to 86,000 gallons. The Center is fortunate that only 7 tanks show evidence of leakage. Site investigations are already underway to evaluate the extent of contamination and determine if remediation is warranted. NASA will implement a remediation should it become necessary.

Although it is proceeding well, the project encountered many hurdles that had to be overcome. Most notable was the unusually heavy rains which the Center experienced in 1995. The wet weather caused the water table to rise and delayed the closure of underground tanks because in some areas they were submerged in groundwater. At one point the Center was even on a hurricane alert, in August when Hurricane Erin took a sudden turn toward Central Florida.

Many aspects of the execution of this project demonstrate the opportunities for conservation available in a project where the overall goal may be viewed as simply removal and disposal. For example, three 86,000 gallon underground storage tanks located at Launch Complex 39B, instead of being cut up and hauled off for scrap, will be reused at the Center's sewer treatment plants. At 65 ft in length, 15 ft in diameter and over 60 tons, these three are among the largest shop fabricated storage tanks ever removed intact. Removing and transporting these

was a considerable task which required the unique capabilities of over 10 organizations, including the 350 ton mobile crane and crew, and the KSC railroad (see picture). These tanks were used during the Apollo program to store rocket propellant prior to launch. Thousands of cubic yards of dirt were excavated and used as fill for other projects and also for creating a berm for a flame deflection test for STS-75. In another case, two aboveground storage tanks were provided to KSC Emergency Services to be used in their confined space training program. All other removed steel tanks were sent to a local recycler. Even some of the concrete debris, determined suitable, will be provided to an artificial reef organization to create an artificial reef off the Brevard County Coast.



The closure of the 49 storage tanks has been completed under budget, thereby allowing perhaps as many as 6 additional tanks to be properly closed. This additional work is still underway. The execution of this project is a testament to the efforts at Kennedy Space Center to become more efficient, innovative, and resourceful. And, that there are still groups which exhibit the principles of cooperation, proactivity, empowerment and integrity to get the job done right!

Executive Order 12898 - Environmental Justice

On February 11, 1984, the President of the United States signed Executive Order 12898, "Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations." The general purposes of the Order are:

1. To focus attention of federal agencies on the human health and environmental conditions in minority communities and low-income communities with the goal of achieving environmental justice.
2. To foster non-discrimination in federal programs that substantially affect human health or the environment.
3. To give minority communities and low-income communities greater opportunities for public participation in, and access to public information

on, matters relating to human health and the environment.

In accordance with the Order, NASA established an agency wide strategy, in addition to the requirements set forth in the Order, the following:

1. To execute this mandate promptly and effectively, while keeping the administrative burden at the minimum level.
2. To focus on public outreach and involvement.
3. Due to the diverse mix of location, demography and activity between the centers, each center is responsible for developing its own Environmental Justice Plan.

This newsletter was written and produced by the NASA/KSC Environmental Engineering and Management Office. All comments or questions may be made by calling (407) 867-4049 or by writing to the following address:

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